Scientific American.

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THE
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Poetry.

THE MAID'S LAMENT.

Oh? why am I not married?
I'm sure I'm not to blame:
My frieuds are asking me the time,
When I shall change my name?
They tell me I shall surely be
A nun or lonesome maid;
And such it really seems to me,
For beauty 'gins to fade.
And every hope I had is gone,
They've perished with my years,
And now, no consolation left,
A maid is all my fears.

How many friends in life I've seen,
Have all got married early:
And really I must be excused,
If oft I'm sad and surly.
I scarce can live to see them thus,
Live happy in this life;
Whilst I, poor mortal seem to be
Marked out for no man's wife
But seem to live to bear a name,
That all, alas! degrade:
And I, like others, e'en do scorn,
The title of—"Old Maid."

I've had my chances like the rest,
But then I thought I'd tarry;
For whilst in youth with pleasure blest
Why need I wish to marry,
There's time enough when I am tired
Of living as I do;
And with this fancy like a fool,
My love I did subdue.
But would I now reject a chance,
Though Fancy might persuade,
There still might be another chance?
Oh, no! I'd change the maid.

ANGRY WORDS.

Angry words are lightly spoken
In a rash and thoughtless hour,
Brightest links of life are broken
By their dark, insidious power.
Hearts, inspired by warmest feeling,
Ne'er before by anger stirr'd,
Oft are rent past human healing,
By a single angry word.

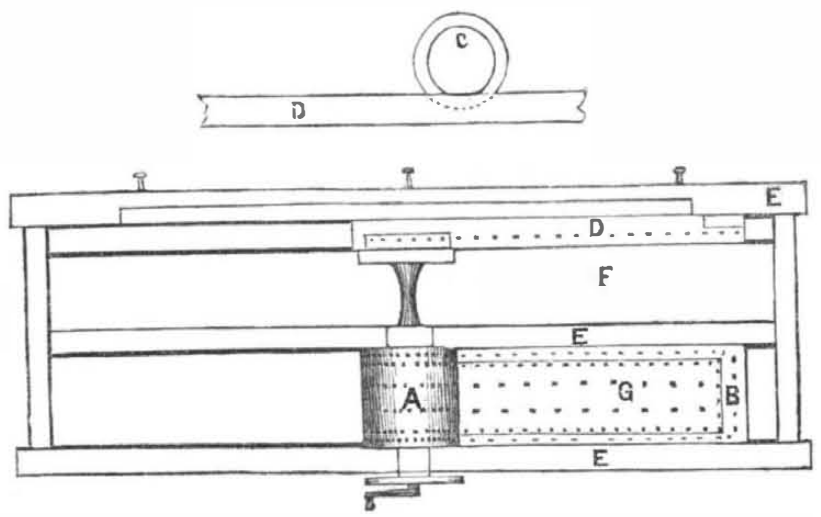
Poison-drops of care and sorrow,
Bitter poison-drops are they,
Weaving for the coming morrow,
Sad memorials of to-day.
Angry words—oh, let them never
From the tongue unbridled slip;
May the heart's best impulse ever
Check them ere they soil the lip.

Love is much too pure and holy,
Friendship is too sacred far,
For a moment's reckless folly
Thus to desolate and mar.
Angry words are lightly spoken;
Bitterest thoughts are rashly stirr'd;
Brightest links of life are broken
By a single angry word.

Friction Matches.

The fabrication of chemical allumettes occupies in the environs of Paris more than a thousand workmen, A single house employs three hundred. One house sends annually to London friction matches to the amount of 120,000 francs.

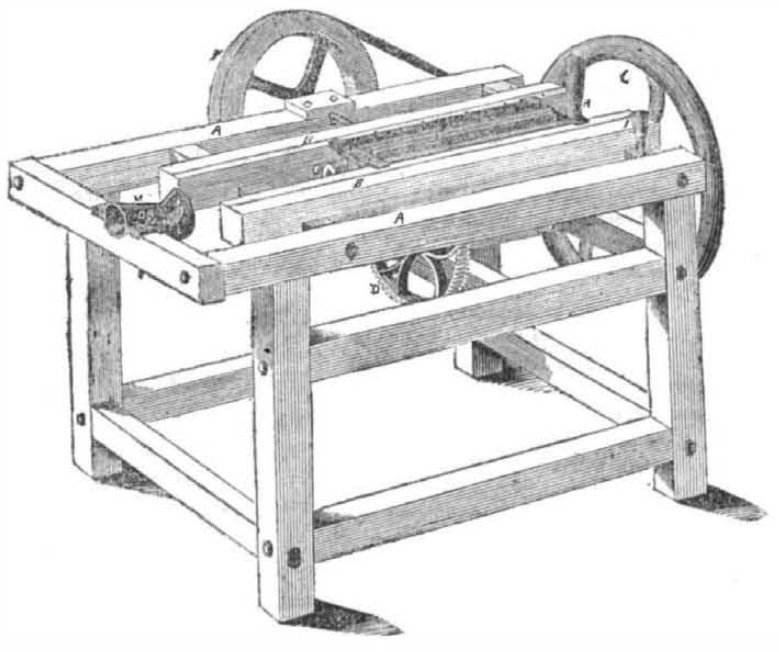
MACHINE FOR PUNCHING COPPER SHEETS.



The above engraving is vertical view of a machine, invented by Mr. William H. Danforth, of Salem, Mass. It is well worthy attention, as it is very simple for the purpose intended.

A is a cast iron cylinder, the dots representing punching irons upon its circumference; B is a travelling bed plate or carriage on which the sheet to be punched is placed; the dots represent the holes to receive the punching irons as the carriage is taken through it being done by means of a roller under the carriage connected to the cylinder by gearing wheels, the lower gearing wheels being turned by a crank: C, is a rim of steel or cutter on one side of the edge of a cast iron wheel which has a sharp corner fitting closely to a corresponding one on the edge of the small carriage D. The dots on the wheel represent punching irons (side view) and the dots in the carriage representing holes as before stated. E E E, is the frame work of the machine. F is a sinkage of 3-4 of an inch below the surface of the carriage D, upon which the sheet to be reduced in width is placed and held firm by set screws, the part to be cut off falls upon the sinkage F, as it passes under the cutting wheel, the part that remains upon the carriage is reduced to the proper width and one end is punched, the carriage is kept closely to the cutter by means of set screws: G, represents a sheet of copper upon the bed plate after passing under the cylinder. Measures are taking to secure a patent.

TREENAIL MACHINE.



The above is an engraving of Mr. Nathan O. Mitchell's machine for making Treenails for shipbuilding. It was invented by Mr. E Webber, but is now the exclusive property of Mr. Mitchell, Gardiner, Maine. It is a machine which has received the most favorable testimonials from the first shipbuilders and owners of vessels in Maine. It makes a perfect Treenail and is therefore superior to any other mode of making them that is at present known.

DESCRIPTION.—A A, represents the frame. B B, timbers to which slides are attached for operating the machine. D, is the driving cog wheel. E, long cog pinion frame. F, band wheel. G, socket to hold the treenail to be turned. H, handle to move back the cog pinion frame after the treenail is turned, for the purpose of saving time, instead of reversing the motion of the wheel C. J, is a handle as shipper to feed the gear. L, is a shaft on band wheel running across the frame and meshing into a rack on the under side of cog frame, by a small cog wheel for the purpose of moving cog frame on to the cutter and back by a reverse motion. M, is a double trumpet mouth cone through which the treenail passes. N, cutter. O, lips and screw to hold the cutter.

OPERATION.—The wood for the treenail is fixed in G; the balance wheel is then moved, which being on the end of the frame has a cog wheel on its horizontal shaft, which meshing into a large plate cog wheel, (these are not seen,) on a cross shaft, drives a small drum which by the band drives the band wheel. The band wheel drives a small cog wheel on the end of its cross shaft L, which moves the cog frame by a rack below on to the cutters. The cog driving wheel D, meshes into the cog frame and by the motion on the horizontal shaft on C spins round the cog frame, which being moved forward by the rack spoken of on the cutters N, drives the treenail of a perfect shape through the hollow cone cylinder M. It will readily be understood by this description that the cutter is stationary and that the cog frame holding the rough wood for the treenail spins round turning the treenail, while at the same time the horizontal motion of the frame drives the treenail through the the iron cone mould M. The cog frame therefore has two motions when in full operation. One is a rotary motion from the wheel D, the other a forward horizontal motion from the shaft of the band wheel working on a sliding rack underneath.

This machine can now be seen at Mr. Hills, see advertisement on another page. Mr. Mitchell is desirous of selling the patent right, and there can be no doubt of its value, as it can be varied to cut the treenails of all sizes, It is therefore an important machine for shipbuilders. Information respecting the machine can be had either of Mr. Mitchell, the proprietor, or Mr. Hills, the Agent.

RAIL ROAD NEWS.

The Broad Guage.

The broad track has been been adopted by the Erie, road, New York: the Paterson and Ramapo, and the Athica and Hornersville route. This makes the broad guage rather a feature in New York State, and its example will stand much chance of being carried throgh upon other roads that intend to do a large business.

Telegraphing.

A correspondent of the Buffalo Express, tells the largest story yet of feats performed by Telegraph operators. He says, among other marvellous things, that Mr. S. Porter, the Superintendant of the telegraph line from Buffalo to Toronto, Canada, for lack of other facilities at the moment, has read communications correctly by holding the ends of the wires in his hands and observing the twitchings of the nerves at his wrist. Another operator, Mr. C. C. Haskins, who is in charge of the office at Queenston, by placing the end of the wire upon his tongue, reads perfectly, and without the slightest error, by the sensation of the shocks. This he has often done, and with entire accuracy.

There are eleven lines of telegraph in the course of erection in the United States and Canada.

Niagara Suspension Bridge.

"The Suspension Bridge Companies have directed the construction of the Bridge for the passage of Railroad trains, and also for foot and wagon tracks. The strength of the supporting cables is to be no less than six thousand five hundred tons.

The cost is not to exceed $190,000 and the whole is to be completed by May 1st. 1848.

The Bridge will be within sight both of the cataract and whirlpool, and span the gorge by an arch of 330 feet, suspended 230 feet above the surface of the Niagara River."

An undertaking beside which the works of the ancients appear as dwarfs beside a giant.

A correspondent informs us that wood goes further when left out of doors than when well housed, some of his having gone upwards of a quarter of a mile in one night.

"The fire is amazingly cold," said an old toper, who was trying to warm his toes in the moonlight on a snow bank.

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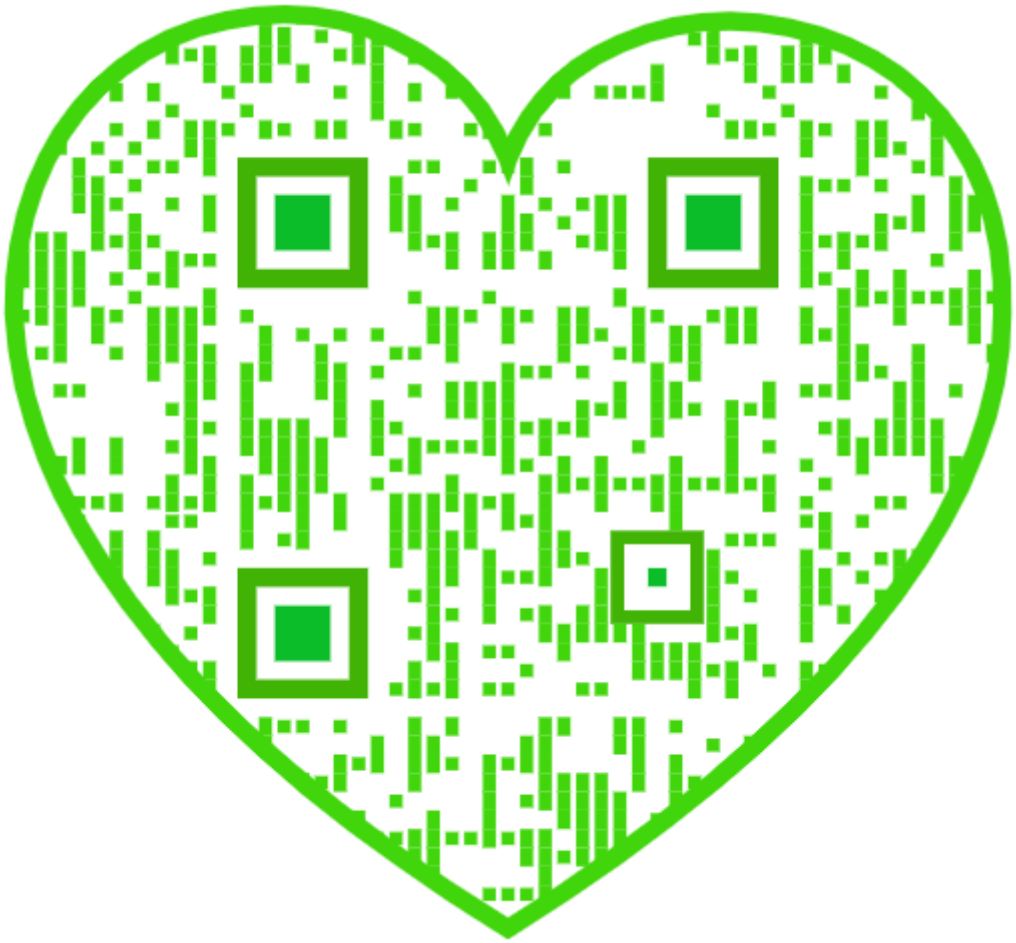

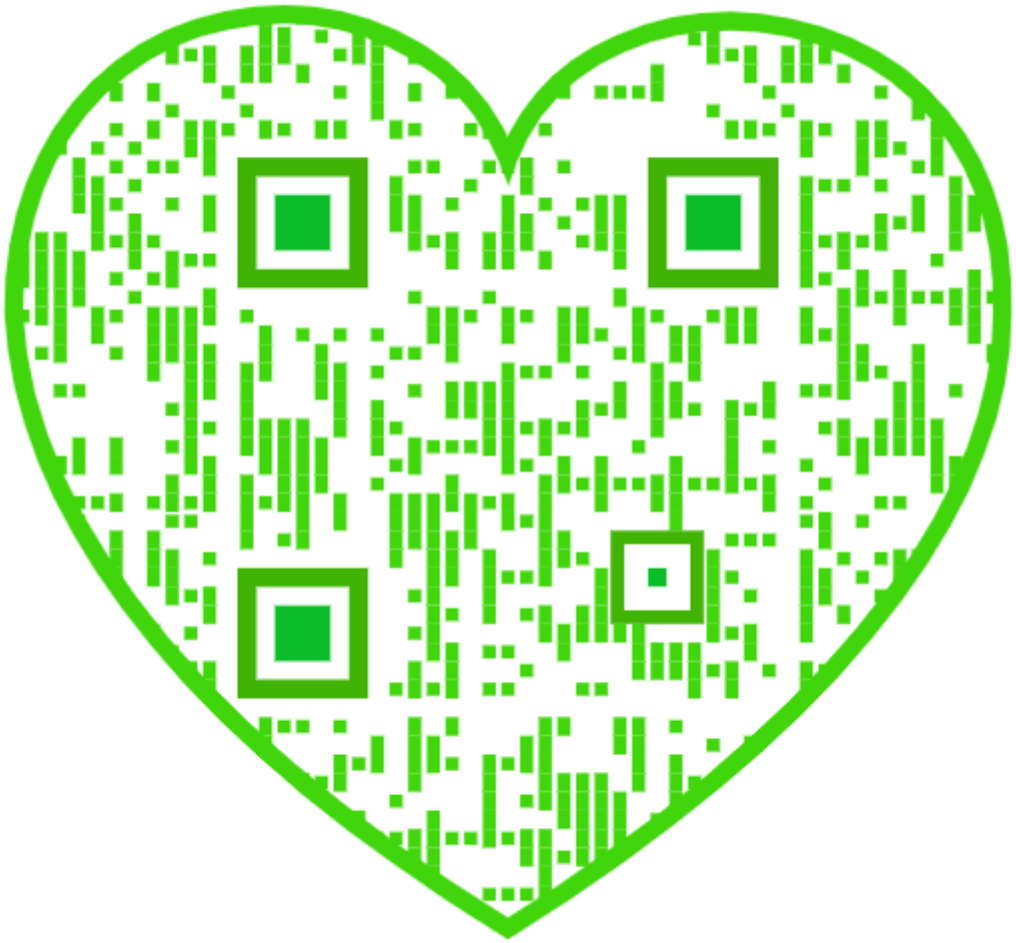

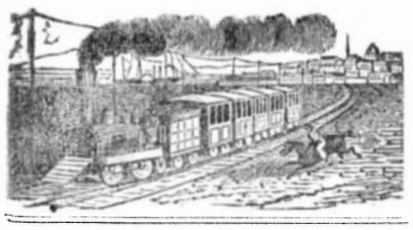

Thanksgiving.

The good old Puritan custom of Thanksgiving has become almost universal in every State, thereby giving evidence that the stream flowing from Plymouth Rock shall yet spread over our whole land. We have indeed cause to be grateful to our Creator for his blessings. He has given us a goodly land, and while the wailings of famine and distress come floating upon every billow from Europe, we have enough and to spare, and let us be thankful to God that while he has given us much to spare he has also put it into our hearts to cast our bread upon the waters. It will return with interest, for "he that giveth to the poor lendeth to the Lord." Thanksgiving is generally a happy day, in New England especially — Then separate relatives gather together, and old and young bask in love, happiness and friendship. May this simple and beautiful custom, never be abandoned, but become closer and closer entwined round the hearts of our people.

Scientific Expedition to the Dead Sea.

A party of Naval Officers under the command of Lieut. W. F. Lynch, will shortly sail from this port, in the U. S. ship Supply to the Mediterranean, for the purpose of making an exploration of the Dead Sea. One great object of the investigation will be to ascertain whether this sea and its shores are of volcanic or non-volcanic origin. The elucidation of this subject is a desideratum to science. Costigan, the only man who has undertaken to circumnavigate this sea, perished in the attempt.—British officers have tried but also failed.

Preserving Butter.

The farmers in the parish of Udney, in the county of Aberdeen, practice the following method of curing their butter, which gives it a great superiority above that of their neighbors:—

Take two parts of the best common salt, one part of sugar, and one part of saltpetre, head them up together, and blend the whole completely; take one ounce of this composition for sixteen ounces of butter, work it well into a mass, and close it up for use.

The butter cured with this mixture appears of a rich and marrowy consistence, and fine color, and never acquires a brittle hardness, nor tastes salty. Dr Anderson says, "I have eat butter cured with the above composition, that has kept three years, and it was as sweet as at first." But it must be noted, that butter thus cured requires to stand three weeks or a month before it is to be used; if it be sooner opened, the salts are not sufficiently blended with it; and sometimes the coolness of the nitre will then be perceived, which always totally disappears afterwards.

The above is worthy the attention of every dairy woman.

A Cure for Deafness.

Equal parts of the juice of house-leek, brandy and sweet-oil in a phial, to be hung up and exposed to the sun for a month or more. This dropped into the ear at night, and on wool to be kept in the ear—a sure remedy for deafness.—*Ex.*

Some kinds of deafness only, and which can be cured as well by soap and water, injected by a syringe, a plan which we have seen tried with some success—Ed.

Balloon Mirage.

Mr. Gale, the aeronaut, witnessed a phenomenon during one of his aerial voyages, which is said to be unprecedented to the annuals of balloons.—Having become becalmed and perfectly stationary, for a full quarter of an hour, he was preparing to descend, when suddenly he beheld a perfect "counterfeit presentment" of the machine depicted on the clouds to the Southward. This appearance continued for about four minutes, when the baloon descended to a lower region, and the image gradually faded away.

Steam Factory in Hartford.

"A company has been formed in this city," says the Hartford Courant, "with a capital of $40,000 for the purpose of manufacturing goods from wool or cotton by steam. They are now laying the foundation of their factory in Little Grove street near the corner of Potter. It is to be 140 feet long by 40 wide and 4 stories high.

"We are informed that those who have been engaged in steam factories express the opinion that with the improved machinery steam power can be used with quite as good economy as water—the cost of the former being no more than what is usually paid for water privileges and for heating the buildings."

Electricity Universal.

Electricity is diffused through the entire mass of this globe and of the atmosphere which surrounds it. and it may be regarded as one of the most active elements in all the works of creation.—In every chemical change with which we are acquainted—in the various processes of organic life—in the mechanical movements of particles of matter—in any alteration of state, under the influences of heat or solar radiation, it is by mere contact with solid bodies that electricity is developed We learn to know it as something fearful from the irresistable power of the lightning and the thunder of its terrible explosion. We marvel at its influence in directing the needle of the mariner, and we are astonished at the rapidity of its flight,

Flax in Canada.

A public meeting was recently held at Quebec, for the purpose of hearing some explanations from Colonel Calvort, in relation to the application of the Ledoyen Fluid to the purposes of Agriculture, and more especially to the cultivation of Flax. The Colonel stated that the soil and climate of Canada were admirably adapted to the cultivation of this useful article of manufacture.

Knowledge is Power.

The following is Sir W R. Hamilton's theorem of hodographical isochranism: "if two circular hodographs having a common chord, which passes through or tends towards a common centre of force, be cut perpendicularly by a third circle, the times of hodographically describing the intercepted arcs will be equal."

A Science Revived.

Pythagoras invented a means by which everything that he wrote upon a mirror with bean juice became legible in the moon. When Charles V. and Francis I. were waging war with each other to obtain possession of Milan, everything that happened in the day at Milan, could, by means of such a mirror, easily be read on the moon a night in Paris.—*Ex.*

It is revived. There is Davis.

The Park Fountain.

A fine granite curb is to be put around the pond of the Park Fountain in this city. Well, it required some move of that nature to adorn the blessed spot celebrated for shady trees and grubs. We hope, however, that the Bowling Green fountain will not be desecrated by the Gothic hand of reform. No, no. What a fine mountain cataract; how like chunks of turtles weeping for the honor of its projector.

Death of the Righteous.

I once met on the sea shore said the Eastern poet, Sadi, a pious man who had been attacked by a tiger, and was horribly mutilated He was dying and suffering dreadful agonies. Nevertheless his features were calm and serene, and his physical pains seemed to be vanquished by the purity of his soul. "Great God," said he, "I thank thee, that I am only suffering from the fangs of the tiger, and not of *remorse.*"

Milton B. Buffington, a New York and New Haven railroad contractor, has taken leg leave with $15,000 belonging to sorry workmen without a cent in their pockets. He that oppresseth the hireling in his wages shall yet have his reward.

A new factory is going up at Thompsonville, Ct., over 300 feet in length and 60 feet broad. It will contain, when it is finished, 1,500,000 bricks.

Battle With the Hasty Pudding.

Dr. Radcliffe was remarkable for a sudden thought in extraordinary cases: he was once sent for into the country by a gentleman who was dangerously ill of a quinsey. The doctor soon perceived that no application internal or external would be of service; upon which he desired the lady of the house to order the cook to make a large hasty pudding: and when it is done let his own servant bring it up. While the cook was about it, he took the man aside, and instructed him what he was to do. In a short time the man brought up the pudding in great order, and set it on the table, in full view of the patient. 'Come, John,' said he, 'you love hasty pudding: eat some along with me, for I believe you came without your breakfast.' Both began with their spoons, but John's spoon going twice to his master's once, the doctor took occasion to quarrel with him, and dabbed a spoonful of hot pudding in his face; John resented it, and threw another at his master. This put the doctor in a passion, and quitting his spoon he took the pudding up in handfuls, and threw it at his man; who battled with him again in the same manner, till they were both in a woful pickle. The patient, who had a full view of the skirmish, was so tickled at the affray, that he burst into a laughter, which broke the quinsey, and cured him. The doctor and his man were well rewarded.

A Mexican Diligence.

A Mexican diligence is fimilar to an American post coach or mail stage, and a stranger from the United States, taking his seat in one of them, while all else around him is nearly the antipodes of what he has been accustomed to, feels old sensations revive, as he once more finds something that looks like home. No better stages are used anywhere than those employed upon the roads of Mexico, and for the best reason in the world, which is they are all of Troy manufacture, and finished in the best possible style, excelling in neatness, comfort, and durabilty; the latter quality being particularly necessary in that mountainous region.

The English Postmaster General has addressed a circular to the Post Office authorities of all the countries of Europe, urging them to co-operate with England in introducing a system of uniform penny postage in Europe.—The sooner our own government tries the experiment the better.

The Telegraph line between Troy and Montreal will be completed in about three weeks. Mr Holmes, the indefatigable superintendent is rushing up the posts like a locomotive.

The Boat business on the Savannah River never was brisker than during the present fall. One company the Georgia has eighteen tow-boats and several lighters well employed.

The Canada papers say that a gold mine has been discovered in Canada. at a distance of 40 miles from Quebec.

A new volcano broke out on the 11th of June, in the island of Toku, in the Pacific Ocean. Its appearance was preceded by an earthquake.

On the 22nd ult,, the Custom House officers in Newry made a seizure of 22 barrels of American flour, in which was found concealed a large quantity of cavendish tobacco.

The imperial Academy of Sciences of St. Petersburg, has offered a prize of 2000 roubles for the "best History of the Cholera."

The legislature of this state, by an act passed on the 13th inst., have abolished the office of county superintendant of common schools.

A Baptist church was recently dedicated at Galveston, Texas. The dedication service was performed by Presbyterian, Episcopal, Methodist, and Baptist clergymen.

The uniform penny postage has been introduced in the British Colony at Hong Kong.

No one in the world is so often cheated—not even women and princes—as the conscience.

To our British Subscribers.

According to the notice recently given by the Post Master General, all mailable matter destined for the British provinces must be prepaid at the office where mailed, consequently we are obliged to pay 1½ cents postage for each paper that we send to our subscribers in Canada, New Brunswick and Nova Scotia. As this is a heavy tax in the quantity that we send each week to all those places, we shall be obliged to take the amount that we have to pay for postage from the amount each subscriber has paid towards the paper, until some arrangement can be made between the two governments, to make the postage free again, which is earnestly looked for, by publishers especially.

Patent Agency.

Applications for Patents made at this office, on the most reasonable terms. Neat drawings, specifications, and engravings of the first character, and cheaper than anywhere else. Notices of new inventions, Agency for the sale of Patent Rights, and all business of that nature, promptly attended to. Those who have patent rights to dispose of will find a good opportunity and field for their sale—such as Horse Power Machines and Waterwheels of every description. The largest circulation in the world for advertisements of inventions, &c.

De Witt's Elevated Railway.

There is to be seen at the Rooms of the American Institute a model and drawing of an elevated railway, the design of R. Varick De Witt, Esq., C. E., of Albany. We visited it during the absence of Mr. De Witt and consequently our ideas regarding its utility are unbiassed by a flowing personal description. It is very simple and could be erected at much less expense than Mr. Randall's. We shall notice this invention in another number.

Banner and Sign Painting.

To those who desire fancy painting in any or every form, we would recommend Ashe, of 133 Fulton street, opposite this office, as an artist that will please the most fastidious.—His portrait and banner painting is superb, and as a professional draughtsman, none excel him. He has been prevailed upon to open a school for the instruction of those who wish to avail themselves of his peculiar art in drawing, and now is an excellent opportunity for all to obtain his instructions. Those who have learned Drawing, find it profitable to attend the class of Professor Ashe. See advertisement.

Union Magazine.

The December number is a splendid one. This magazine has an elevated moral tone, and no person who reads it can but feel better in heart after the perusal. There are two fine steel engravings, "Give me back my child," and "Steps to Ruin," which convey a useful and touching lesson without a single word of explanation. This magazine is edited by Mrs. Kirkland a name well known in American Literature. It is published by Israel Post 140 Nassau Street, this city. The next volume commences on the first af January, and a good opportunity for persons subscribing for a good monthly is now presented.

Chambers' Miscellany.

Berford, & Co, have just issued another number of this entertaining useful and amusing work which they are ready to supply to the trade or sell single. Price 25 cents—each number complete in itself.

The Organ.

This popular "Temperance Journal, is fast gaining favor with the Temperance people in all parts of America.—See prospectus in another column.

A Valuable Farm.

The farm of the late Clayton Earl, Esq,, in Delaware, was sold by Messrs Thomas & Son, on Tuesday evening last, for upwards of $20,000.

The Minister of Commerce has given to three doctors of the faculty of Paris missions to go and study the progress of the cholera in the countries where it is at present raging. These gentlemen, are Drs. Beau, Contour, and Monnoret, and their places of destination are Trebizond, Moscow and Odessa.

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Rotary Steam Engines.

The reasons why rotary engines have never come into general use, are, that all that have been heretofore invented have labored under one of these two difficulties :—

First—Those that have been been built on the velocity principle, that is, deriving their power from the velocity or momentum of a jet of steam acting upon arms or buckets on the periphery of a wheel, have not had sufficient power to make them of practical utility.

Second—Those that have been built on the expansive power principle, deriving their power from the expansive force of steam and not its momentum alone, have never been so constructed as to run with equal ease both ways, besides being complicated, weighty and cumbrous, and consequently incurring a great deal of friction, and more expense.

From the above positions it would appear that the great desideratum is to construct an engine, not on the velocity principle, but on the expansive power principle, with a rotary movement, fixed to run with equal ease both ways and combining the other advantages of lightness, simplicity and convenience, consequently less friction, less expense, and still having the same or more power. This great end has been accomplished in the rotary engine invented by the Messrs Schnebly. The engine we saw was at the foundry of Dunham & Browning, in North Moore street, this city It needs a plate to be minutely described on paper. It only consists of a cast iron drum, in the bead in the top of which the steam is inducted and educted, and within which drum is a cylinder a few inches less in diameter than the drum, with two arms or pistons projecting from its periphery closing up alternately the passage between it (the cylinder,) and the drum, and on which pistons the steam alternately acts with all its force, and so fixed as to recede (and allow the steam to escape,) while passing under the head above spoken of. The shaft passes through the centre of the whole. The head on the top of the drum, has two passages. When the engine is running one way, the steam is inducted through one passage and educted through the other, after having done its work ; and on shifting the sliding valve over the two passages, the reverse motion is produced, and the induction and eduction is also reversed through the same passages.

Now it is universally known that the power of the lever (the fulcrum and resistance remaining the same,) is in proportion to its length and the power applied. This engine operates on the principle of the simple lever, and it continually uses the lever to the best advantage. The resistance and fulcrum being at one extremity and the power at the other, not acting as in the piston engine, at nearly all the angles between a straight line and a right angle, but at the same and nearly a right angle constantly, thus producing a perfectly uniform motion. It is idle to speak further of the engine ; those interested should go and investigate for themselves. J. K. V. S.

[We cannot endorse all that has been said in reference to this engine in the above communication, although every sentence may be correct. But it is not for us to make dogmatical assertions relative to any invention, rntil by continued and fair experiment all doubts are removed. Rotary engines undoubtedly occupy less room than either the parallel or horizontal, but in claiming a thirty horse power for a cylinder of 12 horse power dimensions, as has been done for this engine, we must candidly say that we cannot see how this is possible.]—Ed

Fumi[illegible]

Although we cannot tell what a day may bring forth, it is always prudent to prepare for the future. As the ant prepareth herself for winter, so should man make provision for coming events and especially those events which cast their shadows before. The cholera is in Russia, and it will undoubtedly reach our shores next year, and although it is said to be less virulent and fatal than when it ravaged Europe in 1831–'32, yet we ought to be no less heedless of it on that account.—The following method of fumigation should be resorted to on the very first appearance of it, and every house in an infected district should be fumigated three times a day.—To do this effectually, a mixture of three parts of common salt and one of black oxide of manganese, should be placed just inside the outer or street door of every dwelling house, and a little common vitriol poured upon it.—The inward current of air will convey the chlorine gas to every part of the interior, and and wherever it can be smelt the effect is produced—the miasm is destroyed. If articles of clothing are infected, and the colors likely to be injured by the gas, they may be heated in an oven or on a kiln to 250 or 300 degrees (about the heat of baking bread,) when they might be handled or used with perfect impunity.

Interesting to Sculptors.

The Boston Transcaipt has a letter from Powers, the sculptor, giving an account of a marble quarry, just opened, about thirty miles from Leghorn. The quarry appears to have been worked in ancient times, possibly by the Etrurians, and some chisels and picks have been found there, which closely resemble those now in use. Mr. Powers says : "The sea is in sight of the quarry, at about a mile distance, and so easy and even is the ascent, that we drove over the ground at a full gallop. The road to the quarry from Leghorn is along the sea shore, and is a pleasant ride of only five or six hours. I intend to make the statue of Mr. Calhoun out of this marble, and it will be, perhaps, the first full sized statue made of it in two thousand years. I am now making a bust of Washington from this marble somewhat larger than life, by way of experiment. It is nearly blocked out, and I am satisfied already, that the effect will be all that could be wished. It is singular that the owner of the quarry is a Greek, who has found the marble supposed to be peculiar to his own country, here in Tuscany. He can afford this marble for less than one half the price of Carrara, on account of the great ease and small expense of excavating and taking it to the sea shore. The marble has a rich warm color so desirable in statues and busts, and it is most beautiful in columns, mantel pieces and the like. The grain is coarse like the Parian, but it works smoothly and takes a high polish."

The Wife.

It needs no guilt to break a husband's heart the absence of content, the mutterings of spleen, the untidy dress, and cheerless home, the forbidding scowl, and deserted hearth; these and other nameless neglects, without a crime among them, have harrowed to the quick the heart's core, of many a man, and planted there beyond the reach of any cure, the germ of the most excruciating despair.—Oh ! may woman, before that sight arrives, dwell on the recollections of her youth, and cherishing the dear idea of that tuneful time, awake and keep alive the promises she then so kindly gave And though she may be the iujured, not the injuring one—the forgotten not the forgetting wife—a happy allusion to the hour of peaceful love—a kindly welcome to a comfortable home—a smile of love to banish hostile words—a kiss of peace to pardon all the past, and the hardest heart that ever locked itself within the breast of selfish man, would soften to her charms, and bid her live, as she had hoped, her years in matchless bliss loved, loving, and content—the soother of the sorrowing hour,—the source of comfort and the spring of joy.

Books.

In the best books great men talk to us, and give us their most precious thoughts. Books are true levellers. They give to all who will faithfully use them the society, and the presence of the best and greatest of our race. No matter how poor I am, no matter though the prosperous of my time, will not enter my obscure dwelling. If learned men and poets enter and take up their abode under my roof —if Milton will cross my threshold to sing to me of Paradise; and Shakspeare open to me the worlds of imagination, and the workings of the human heart; and Franklin enrich me with his practical wisdom—I shall not pine for want of intellectual companionship, and I may become a cultivated man, though excluded from what is called the best society in the place where I live.

Railways in Europe.

When Jecquar, the inventor of the wonderful loom that bears his name, was arrested and carried to Paris with his machine, Carnot, in the presence of Napoleon, roughly said to him. "Are you the man that pretends to do that impossibility—to tie a knot in a stretched line ?" His compatriots of Lyons,—the impossibility being surmounted—broke his machine in 1806, and raised a statue to his memory in 1840. All those who are in advance of public opinion must bear ridicule or prosecution. In 1825 the Quarterly Review thus ridiculed the notion of certain engineers, Telford among the number, that a railway engine could go eighteen or twenty miles an hour.—"The gross exaggerations of the powers of the locomotive steam engine, or to speak English, the steam carriage, may delude for a time, but must end in the mortification of those concerned.

* * * * We should as soon expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve's Ricohet rockets as trust themselves to the mercy of such a machine going at such a rate."

In that year the common belief was that railways were altogether delusions and impositions. The Liverpool and Manchester railway was opposed in parliament with every form of invective. One member in 1825, declared his opinion "that a railway could not enter into a successful competition with a canal. Even with the locomotive engine, the rate would not be but 3 1-2 miles per hour which was slower than the canal conveyance. Another assertion which Mr. Huskisson was obliged to meet doubtfully and apologetically was "that there were two or three canals, which were sufficient for every purpose of commerce in the district through which the railroad was to pass. Let us be just to what we have been accustomed to decry as the dark ages. Let us be tolerant to those who imprisoned Gallileo, and rewarded Columbus with chains. If there be a reality in any discovery—a true thing and not a sham ; if there be strength, or utility, or beauty in any work of the mind, it will live and fructify, whatever critics or orators, or even kings may do to crush it. And so with railways. On 15th September, 1830, the first passenger line, the Liverpool and Manchester Railway, was opened. The conveyance of passengers appears originally to have been an interior consideration to the conveyance of goods; and the Directors modestly anticipated that one-half of the passengers travelling by coaches between the towns might venture on the railway. In the first year after the opening there were conveyed 445,000 passengers; in the year ending 1st July, 1845, the passengers so conveyed amounted to 896,003. On the 24th April, 1847, there had been a total expended on the railways of the United Kingdom, of 78-000,000 pounds sterling ; and the aggregate receipts are a total exceeding £8,000,000 per annum for the conveyauce of passengers and goods—being the enormous sum of 38,800,000 per annum.

Manufactures In Russia.

A late London Letter published in the National Intelligencer, says:

Mr. Cobden's late visit to the annual Russian Fair, at Nishnell Novogorod, has revealed striking facts with respect to Russian manufactures. The great variety of articles which were exposed for sale, and the admirable order which was maintained at the exchange of goods, very much exceeded his expectation. Mr Cobden visited several of the manufacturing districts in Russia, where he was much surprised and gratified with the industry and skill of the workmen, principally native peasants. At Woohna he found silk goods manufactured in a very good style to an extent of several hundred thousand roubles annually. At Moscow several manufactures excited his astonishment and admiration. Mr. C. is said to have pronounced the calico printing mills of M. Gutschkow one of the most perfect he had ever seen in its organization. In another establishment, that of M Procherow, the care bestowed upon the health, morals, and instruction of the children employed was very gratifying. The mills in Moscow appear to be conducted with great skill and order, and with a very admirable combination of the various divisions of the manufactory. Cloth weaving appears to be in a very favorable, in fact, in a very advanced state in Russia, and many circumstances combine to bring this branch of industry to the highest perfection. It has long been known that the manufacturers of England had many powerful and skilful rivals on the Continent, but She has not hitherto expected to find them in Russia.

A Turkish Dean Swift.

Nasreddin, the Joe Miller of Turkish story it is recorded, once being at a mosque, was moved by the spirit of (drollery) to step into the pulpit and look down upon the spirituously an-hungered audience: "O true believers !" said he, "do you know what I am going to say to you ?" "No" was the general response. "Then I will not waste my words on so stupid a rabble," said the extempore, D, D. and coming straightway down in high dudgeon went his way. On a second occasion, he renewed his experiment, and his inquiry, and the audience, moved by their previous disappointment, replied, "Yes." "O well !" said the Doctor, since you know, there's no use in my telling you, and again he made his exit. A third time he mounted the pulpit, and made his inquiry, and the audience resolved not to be baffled again, replied "Some of us know, and some don't know." "Well said he with great coolness, "let those who know, tell those who don't know."—and again girded up his loins and vanished in silence.

A New Lever.

There was a little old woman in the city of Glasgow, who much admired Dr. Chalmers, and diligently attended all his sermons, on Sunday, and week days, whether they were doctrinal or practical, theological, or astronomical. One day she came home in great perplexity. Dr. Chalmers had dwelt much upon a "moral lever," with which he wished to uplift human nature. What a "moral lever" was, the old woman could not divine. A friend took the poker, and placed it on the bar of the grate, trying to realize the idea, and make the imagery palpable. The old woman paused—mused—and at last the fire burned. She bethought of the indignity of the pulpit, the subject, the doctor, and herself, by so great a materialization of the moral lever, and bursting with indignation, she asked; "Do you mean to tell me that Dr. Chalmers would preach a hale hour about a poker,"

An Ornamental Nose.

On a fish-woman's stand in front of the market, Boston, last season, a few live lobsters were exposed for sale. A stranger unacquainted with icthiology, came along—and turning over the dormant animals, asked the price, and at the same time raising one of them to a close proximity with his nose. "*Whew* !" said the fellow—"I will hev you prosecuted, mum—*it smells* !"—At this instant, the lobsters claw closing with a "whack" fastened it upon the gentleman's nose. The old woman placed her arms akimbo in triumph—and simply asked the gentleman, who smells now *mister* ?"

Haunted Houses.

Mr. Hoynter states that at a parsonage in the County of Kent. England, known to him, a knocking was heard at certain times and could not be explained, and obtained for the house the reputation of being haunted, but was found to be caused by a baker at the opposite end of the village chopping wood.—The sound, it was thought, was produced by an old well opposite the parsonage. Mr. J. A. Pictous, of Liverpool, instanced a case where similar sounds heard in a house, were found to proceed from a stream let at a very considerable distance, and not audible elsewhere.

The total liabilities of all the houses that have recently failed in England are said to be one hundred and seventeen millions and a half of dollars. Of this amount at least one hundred and five millions of dollars belong to the United Kingdom,

Five years after the opening of the grave yard of Houston, Texas, it contained 5000 graves. At the same time the population of the city amounted to 5000.

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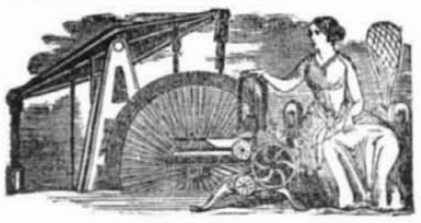


New Inventions.

Improvement in Safes and Warehouse Doors.

Mr. Barnard A. Warren, Gold Pen manufacturer, Brooklyn, N. Y. has invented a plan for making Safes and Vaults and Doors perfectly secure against being cut open by any mechanical instrument. It must be of great importance to Banks where large quantities of money are deposited and to Warehouses where valuable goods are stored. The late, almost successful robbery of the Seventh Ward Bank, where the iron plate of the Safe was cut through like cheese, has excited the mind of the inventor to make something that would be proof against burglars' cutting tools and the result has been a safe, made for himself, to answer the desirable purpose. The improvement is not expensive, and letters patent have been applied for.

New Street Railroad.

Mr. Leander Rodney, of Philadelphia, proposes a new plan for a street railroad, which has some novelty at least. The tracks are to be laid with convex rail several feet under ground; two concave wheels, to each car, to run on the said convex rail; a number of iron bars or shafts, having one end attached to the wheel frame, or axletree, under ground, and extending perpendicularly through an opening only a few inches in width to the springs of the cars above ground, said opening along and through which the shafts must pass, to be strongly built up on both sides with rough hewn stone, and the top covered by a series of valves attached by hinge joints to the cheek or top of one side of the opening—the valves to be raised by a projecting lever or shear, something like a plough share, and closed again as fast as the shafts and car shall pass along—the top of the valves to resemble the pavement, rendering them almost imperceptible, and offering no obstruction whatever; the cars to be two stories high—the first or lower story to be only wide enough for one row of seats, leaving sufficient room for two carriages or carts to pass at the instant the two trains are passing,—the second or upper story to have two rows of seats and a passage way, the stairway to be inside. The cars will always incline to the right, and be regulated by two small wheels, called governors, running on a side rail just below the top of the opening.

Preserving the Dead.

James S. Scofield, chemist of Division st., this city, professes to have discovered a chemical process to preserve from decomposition the body after death. So efficient it is said is the process that the ravages of time and decay are completely frustrated—the body remaining in a state of perfect preservation, without change even in color. One of the many advantages of this process is that the body may be kept for any length of time, thereby permitting the arrival of distant relatives before consigning it to the tomb.

Another Washing Machine.

Mr. Dennis Newton, of Homer, Ohio, has invented a new washing machine whereby he combines a swinging or pendulum lever with the rubbing board, so as when the end of the lever is raised and lowered the clothes are turned and squeezed so that the washing is performed in a very short time.

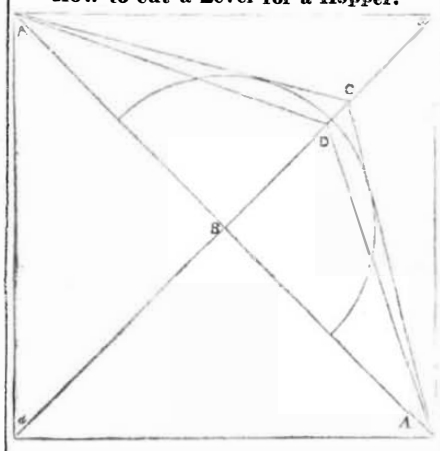
The Pneumatico Hydraulic Engine.

Professor Bigham, of Covington, Ky., says the Cincinnati Atlas, claims to be the inventor of a machine, to which he has given the above name, which by the application of merely a one horse power, will raise water 300 feet, and in quantity sufficient to supply the whole city of Cincinnati! He says he can fill a reservoir on Mount Adams of any capacity and keep it always full for less than $2000 a year. Too good news to be all true.

Improved Harrow.

Mr. Francis Kent, of the township of Chinguacousy, Canada West, says the Hamilton Gazette, has invented and is now patenting, what has long been considered a desideratum—a perfect harrow. It is 14 feet in width, and is in three parts; a centre, to which the horses are attached, and a wing on each side, coupled to the centre piece by an iron rod. In passing among stumps, or large stones, one or both wings can be lifted as occasion requires, and they, of course, accommodate themselves while being dragged along to every inequality of surface. The harrow being drawn by the centre, brings the draft near the horses, making it easier to draw, and also causes the same depth of harrow to pass on all the ground that it embraces, which is not the case with any other harrow; and in order to prevent the harrow from rising, in consequence of the horses being hitched so closely, they draw by a beam, turning up in front like a sleigh runner, into which the butts of the centre piece are morticed.

How to cut a Bevel for a Hopper.



I send you a plan which I think simple and easily understood, and one which I know to be perfect for any angle whatever.

RULE FOR A HOPPER.

First draw the size of the top of the hopper, A *a* A *a*; then draw lines across it diagonally, or across from corner to corner; then measure up from the centre B, at the intersection of these diagonal lines, on one of the lines, the depth of the hopper to C; then draw two lines from the corners A A, to C; then set the dividers at B, and describe a circle just so as to cut the lines A A and C; then draw lines from A A, to the point D, where the circle crosses the line B C, and which will be the right bevel for the corner piece.

E. Bishop.

Improved Carriage Hub.

Mr. A. E. Lyman, carriage maker, Williamsburg, Mass., has invented a new and most useful improvement in the manner of combining the axle and hub of a carriage wheel.—The invention consists in having a groove cut on the axle just inside of the hub and by having a coupling box bolted on the inside of the hub also, through which the axle slips into the hub and is fastened to it by a spring in the coupling box which catches the rim of the groove of the axle and holds it fast while it works in the groove smoothly as the wheel spins round. The outside of the hub is box'd over and no dirt enters. To gear and ungear the wheel on the axle for greasing or any thing else, is but the work of a moment, by turning the spring. Application has been made for a patent. We shall present an engraving of it next week.

Improved Hoe Rake.

Mr. Lyman has also invented a combination of the hoe and rake, very useful for gardeners and for florists Every person who has a taste for gardening should have one. There are some fit for ladies for decorating the parterre, and they are neat instruments. They are for sale by Clark & Wilson, Platt street, this city, and at a number of the hardware stores in Pearl street.

New kind of Brick.

A gentleman of Woodbridge, England, has invented a new kind of brick, so shaped as to form internal channels for the passage of air, and by this means produce a complete wall ventillation, a counterpart to the ventillating glass windows noticed a long time since in our columns.

New Application of Atmospheric Pressure.

I beg to suggest to some of your mining engineers the application of air-pumps and an exhauster to be fixed close to the water-wheel or other motive power, and to select a spot whereon to fix a drawing machine, that any shafts already sunk, or any hereafter to be sunk, may be worked to the greatest advantage. This machine to consist of two cylinders, say of 16 in. diameter, with slide-valves and a double crank, so fixed as to turn the centre; and the communication between the exhauster and this machine to be by means of a close pipe, laid under the surface. to exhaust these two cylinders, and to allow the pressure of the atmosphere to act on the pistons; this could be worked with a 5-ft stroke to about 36 horse-power. The size, of the air pumps. and cylinders, of course, to be governed by the power available, and by the duty required to be performed. One cylinder and a fly-wheel may be used instead of two cylinders, and I think it will be obvious to any engineer, that the machinery requisite to work this will be very trifling, as there will not be any water wanted to the machine, condensing gear, and other parts, as in a steam engine, but merely the cylinders, cranks, eccentrics, sliding-valves and hand-gear, to regulate the power and speed. It may be worked on the expansive principle, or, by having an inverted safety-valve in the exhauster, loaded to any pressure required: and this machine may be either reversed, or struck out of gear to lower the kibble. I have no doubt but some of your many readers can, on a little consideration, see where this principle can be applied to a very great advantage.

C.

Humane Invention.

The Boston Bee says that Mr. E. N. Morse of that city has recently patented an excellent invention of an apparatus intended to be applied to stables, for the purpose of freeing horses from the stables and taking them therefrom in cases of fire, and this, too, without any danger to the person liberating them, and with the utmost certainty of success Very liberal offers have already been made to the inventor for the privilege of vending his apparatus in the different States. Persons owning horses, from humanity to their animals as well as regard for their property, will undoubtedly apply this humane apparatus to their stables.

To estimate Corn in Bulk.

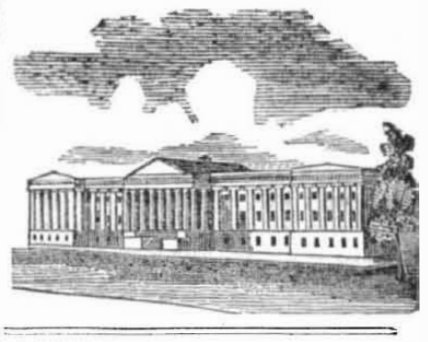
"The following rule for ascertaining the quantity of shelled corn in a house of any dimensions is by William Murray, Esq., of South Carolina, and was read before the St. John's Collection Agricultural Society,—and communicated by them for publication in the Southern Agriculturist:

"*Rule.*—Having previously levelled the corn in the house, so that it will be of equal depth throughout, ascertain the length, breadth and depth of the bulk; multiply these dimensions together, and their product by four, then cut off one figure from the right of this last product. This will give you so many bushels and a decimal of a bushel of shelled corn, substitute 8 for 4, and cut off one figure as before.

"*Example.*—In a bulk of corn in the ear, 12 feet long, 11 feet broad, and 6 feet deep, there will be 316 bushels and 8-10ths of a bushels of shelled corn, or 632 bushels and 6-10ths of ear corn; as 12 X 11 = 132 X 6 = 792 X 4 = 316-8; or 12 X 11 = 132 X 6 = 792 X 8 = 633-6. The decimal 4 is used when the object is to find the the quantity of shelled corn, because that decimal is one-half the decimal 8, and it requires two bushels of ear corn to make one bushel of shelled corn. In using these rules, half a bushel may be added for every hundred; that amount of ears results from the substitutions of the decimals. The term 'barrel of corn,' so much used by the southerners, means 5 bushels of shelled corn."

New method of manufacturing Bank Note Paper.

The paragraph in our last number relative to this invention by Messrs. Crane & Co., of Dayton, Mass., should have read "Dalton, Mass."



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Nov. 20, 1847.

To George W. Campbell, of Belleville, N. J., for improvement in the manufacture of Bullets, &c. Patented Nov. 20, 1847.

To C, Augustus Smith of Cincinnati, Ohio, for improvement in Percolating Apparatus.—Patented Nov. 20, 1847.

To Adrien Olcott, of Newark, N. J, for improvement in machinery for preparing husks for Mattresses. Patented Nov. 20, 1847.

To Edward Harrison, of New York City, for improvement in Mills for Grinding. Patented Nov. 20,1847.

To James Haggart, of New York City, for improvement in Window Sash Fasteners.—Patented Nov. 20, 1847.

To Robert Commings, of Lima, Indiana, for improvement in Bog Cutters. Patented Nov. 20, 1847.

INVENTOR'S CLAIMS.

Improvement in Cotton Spinner

By Elijah M. Harris and James Cleghorn of Cass Co., Ga. Patented August 21, 1847. Claim—What we claim as our invention and desire to secure by letters patent, is the combination of the handles with the axle and hoe frame as described. The axle and hoe frame being independently attached to the axle which forms the fulcrum, and the relative position of the handle and hoe frame being adjustable the handles are converted into levers for elevating and depressing the hoes.

Saw Filing.

By Charles Laffertey, of York Springs, Pennsylvania. Improvement in machinery for Setting and Filing Saws. Patented 21st August, 1847. Claim.—What I claim as my invention, and desire to secure by Letters Patent, is constructing a Saw set in the manner described, by having one jaw raised above the other and bevelled on the face, with a rib behind, as described, by which teeth are set by a toothed lever that hooks over said rib and brings the tooth against the teeth of the saw, as above described—the width of the set of the teeth being determined by the guage substantially in the manner and for the purpose set forth. I also claim the filing apparatus constructed substantially as herein made known, consisting of a file holder, consisting of a standard that slides parallel in front of the jaws of the clamp to which the file attached, as to have a free motion horizontally in any direction to which it is set, and so regulated as to file to any given depth the holder is set for, so that it will direct the file to the proper angle and depth on the saw, in the manner and for the purpose above specified.

Casting Ordnance.

Thomas S. Rodman, of Pittsburg, Pa., for improvement in casting ordnance, &c. Patented 14th August 1847. Claim.—Now, what I claim as my invention and desire to secure by Letters Patent of the United States, is the cooling from the interior of guns or other heavy hollow castings intended to resist [illegible] by circulating within the core a cooling fluid or gas, in combination with the application of artificial heat at the exterior of of the flash to prevent cooling from the without.

New Canal Boat.

The small steamer which was constructed at Bordentown, N. J. for the canal, as an experiment, as far as it has been tried, seems likely, it is said, to prove entirely successful. It is built after the model of a porpoise, and propelled ever so swiftly through the canal, causing no more wash upon the banks than does a common canalboat.

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NEW YORK, NOVEMBER 27, 1847.

To the Subscribers to the Mechanics' Journal.

This number completes the volume of the Mechanics' Journal and a good opportunity is now offered for its subscribers to form clubs and subscribe for the Scientific American.—Ten copies will be sent for $15 for one year, or $7,50 for the same number of copies for six months. The Scientific American has the largest circulation of any other mechanical paper in the world. It is now in its third volume and is known and sent to every part of North America, some copies to the West Indies and a number to Europe. A list of patents granted is received every week from the Patent Office, and more engravings of new and useful inventions appear in our columns in one year than in all the other papers published in this country put together. It is an Encyclopedia of useful knowledge and certainly the most interesting periodical of the mechanic arts that is known. It has some of the most able and scientific correspondents in the United States, thereby making its matter varied as well as interesting and instructive.—It is also devoted to the elevation of labor always pointing to "knowledge as the polar star by which our Mechanics and Artisans should be guided." In it are to be found the fixed and primary principles of the mechanic's elevation. "Without knowledge no mechanic or artist can work to advantage." He should know the why and wherefore of all his operations. The productions of a superior quality are always the result of this knowledge. The Scientific American is a paper for which our mechanics should all subscribe. Scarcely a person who has become a subscriber has ever failed to continue as such. To the subscribers to the Mechanics' Journal we offer the Scientific American as a paper devoted to your interests and worthy of your consideration. If any subscriber is dissatisfied at the end of the year, if he thinks he has not got the value of his money, and if he has kept his numbers clean and fit for binding, let him return them and his money shall be refunded.—We are not able to supply the demand for former volumes. Communications must be post paid and subscriptions always in advance.

Southern Manufactures.

Few are aware of the great activity and enterprise which is now displayed in some of our Southern States in the erection of cotton manufactories. A short time ago we called attention to this feature in Southern industry, and since that period we have received some valuable information both by communications and from our Southern exchanges.

The Columbus (Ga.) Democrat says that a factory to be propelled by steam is about to be erected at Drane's Mills, Mississippi. A gentleman writes us from Saline Co., Arkansas, that he is about to erect a cotton factory there. A large new factory is fitting up with machinery in Wheeling, Va., superintended by a gentleman and first rate practical man, Hugh Bone, Esq. We have been informed that in Georgia alone there are twenty eight cotton factories. and Gov. Crawford in his annual message to the Legislature of that State, strongly advises the fostering of manufactories by the incorporation of companies with liberal charters for the manufacture of the great Southern staple, cotton. A new factory is about to be started at Newport, on the St. Mark's river, Florida. Near Nashville, Tenn. a large factory has lately been erected. There are 6 cotton factories in Spartansburg district, S. C. running 4172 spindles and the one in the course of erection at Charleston, S. C. is calculated to run 3000. Alabama is also waking up to the interest of manufacturing. Mr. Pratt, a native of Connecticut has lately erected a cotton factory in the village which bears his name in that State, which is to run 3000 spindles, and it is calculated 30,000 spindles will yet be whirring in that place.

From every quarter of the South there is the clink of hammers fitting up machinery. Georgia appears to take the lead in manufacturing, and the tone of the whole Southern press is, "we must depend upon ourselves, and develope our own resources." There can be no doubt but that climate, soil and the raw material are all in favor of making the Southern States of America the cotton manufactory of the world Some contend that our climate is not so favorable to the manufacture of fine goods as that of England, but France is different in climate from Britain and yet her muslins are not surpassed, and the turbans of some of the Orientals are so fine and compact that the threads cannot be seen. A small quantity of olive oil in the dressing, although requiring longer time, is a wonderful addition to assist in fine weaving. Hand loom weavers of fine work, all use a little tallow after dressing their webs, putting it on with a brush

Reward of Invention.

We notice with much pleasure a well merited compliment paid by the Belknap Gazette to Dr. B. F. Palmer, of Meredith, N. H., the inventor of the *premium patent Leg*, which we noticed in No. 37, vol. 2 Scientific American. When Mr. Palmer was a lad of eleven years old he had the misfortune to have his leg caught in a bark mill and so crushed that amputation became immediately necessary.—From that time he toiled on, struggling with all the hardships that would naturally attend a poor boy who had been deprived by Providence of the ability to engage in any active labor. His own wants naturally turned his thoughts upon the invention of an artificial leg. For years, in connection with his other duties, has he been engaged in the desired discovery. Many a weary hour, both by day and by night, had he expended, when the happy thought flashed across his mind, and the joyful discovery started out before his imagination like a beautiful picture. The reward of his toil came home to his heart at once, and the reward was the sweeter by reason of the toil he had expended. He sat himself to work to realize the idea which he had conceived, and produced a leg that almost rivals in perfection the natural limb. But unlike most inventors, his reward is not wholly intellectual. He has been offered $75,000 for the patent right of the United States, but does not choose to part with it for that price. He is at this time taking out patent rights in Canada, in England and some other foreign countries. The business of manufacturing these limbs promises to become immense. Recently he has supplied a few limbs for officers of the army. Captain Allen, of Tennessee, who lost his leg in Mexico, has one which gives him such perfect satisfaction that he has ordered another.

Cheap Postage.

The deficit of the first year after the act, was $800,000; the deficit of the last year was $640,000; while the deficit this year is only $40,000. It is rumored that a plan will be introduced into the next Congress, to reduce the rates of postage and make all letters be prepaid. This would indeed be a salutary Postal Reform.

Amputation.

Prof. Gibson, says the Richmond Enquirer, in the presence of the class and several medical gentlemen, performed an amputation of the thigh at the Medical College, on Thursday morning, the patient being under the influence of ether This adds another in the long catalogue of instances, in which, by the aid of this inestimable blessing to humanity, pain and distress are spared during one of the most severe and trying operations. It was interesting to notice, that while under the influence of the ether, during the removal of the limb, the patient remained perfectly quiet manifesting not the least symptom, of suffering; but during the dressing, after the influence of the ether had passed off, the mere introduction of a suture caused evident signs of sensibility.

Railroad Business.

Only fourteen lives and $18,000 worth of flour have been destroyed on two of the New England railroads during four weeks past.

Electro-Gilding.

PART II.

The earliest experiments in Electro-Gilding were made by an Italian in 1805, who used a solution of nitro-muriate of gold (aqui regia) with a solution of ammonia. His experiments were rather intoresting than practical as the affinities of these acids—acquafortis and muriatic—even combined with gold, have such an affinity for the baser metals, that when the nitro-muriate of gold is placed in contact with them, an interchange of elements takes place, and the gold is set free without even an electric agency. The same observations apply to the salts of silver.

The best solution for silver plating is the cyanide of silver, which is made by combining the oxide of silver with cyanide of potassium, weich is made as follows: Break 4 oz. of the prussiate of potass in small pieces and dry it well on a plate of iron; then reduce it to a very fine powder. In like manner do so to 1½ oz. of the carbonate of potash, and mix the two ingredients well. Place a crucible in the fire (Hessian) and when it becomes red put in this mixture, cover the crucible, keep up the heat till the fluid mass becomes red hot and by immersing from time to time a hot glass rod and withdrawing it until the adhering mixture is colorless and clear, it is then complete so far as this operation is concerned, when the crucible may be removed, allowed to settle and the fused mass then poured off, the greater portion of which will be found to be simple cyanuret of potassium, and may be used in that state for all common purposes.—It must be kept in close bottles, and it is a powerful poison, having the odor of peach blossoms. To add silver to the above solution for gilding, it is necessary to oxidise the metal. This is done by feeding nitric acid with pieces of silver, then adding a few pieces of copper to the solution when the silver is precipitated in a grey powder. The liquid is then to be thrown away and the precipitate washed in sulphuric acid and then washed well in pure warm water. Then re-dissolve it in nitric acid and water and a solution of pure nitric acid is the result, when the acid may be driven off by a spirit lamp applied to an evaporating dish, or a saucer in which the liquor may be contained. The nitrate of silver thus obtained, is the powder used to ornament red hair and whiskers by turning them black, a foolish and dangerous practice in the line of foppery This is also the lunar caustic of surgery, and it is also used for making indelible ink. To oxidise the nitrate of silver, drop a few crystals into a glass containing lime water impregnated with as much lime as will dissolve in it, which is but little, when the liquor will turn brown, and a dark precipitate is the result. The liquor is then poured off and the sediment washed with water.—This is the oxide of silver, which for electrotyping should not be dried but be kept in bottles with water. A quarter of an ounce of the oxide of silver added to two ounces of the cyanide of potassium dissolved in a pint of rain water, forms a good plating silver solution, the which we shall treat of again.

As chemical experiments, the foregoing must be interesting to all. No person who boils a kettle or a pan says Sir Humphrey Davy, "but should interest themselves in this sublime science."

Coal Mine in Rhode Island.

About a year ago a statement appeared in several public journals that a bed of coal had been discovered at Valley Falls, and that preparations for mining it had been commenced. A company was formed called the Blackstone Coal Mining Company, and mining operations were commenced. and have been continued to the present time. The result is a conviction that the undertaking will succeed beyond the expectations of every one, and we have heard that several companies are formed to engage in the enterprise, We hope that fuel will be thus cheapened, in this city, for certainly it is too high for our working people and foundries.

Personal Property.

Since 1840, the personal property of Boston has increased from 34 to 64 millions of dollars; while that of New York has decreased from 65 to 59 millions.

Reaction Water Wheels.

On the 11th inst. the Committee on Science and the Arts of the Frankiin Institute, Philadelphia, made the following report, on—

1st. What are the characteristics of a Reaction Water Wheel, or, how should the term be technically defined?

2d. Are all wheels propelled in whole or in part by the backward pressure of the water, in its discharge from them in a direction contrary to their circular motion, reaction wheels?

3d. If a wheel discharge the water propelling it through issues, or apertures, inwardly, and in a backward direction, or contrary to the circular motion of the wheel, is it a reaction wheel?

4th. If the propulsion of the wheel is, in whole or in part, from the backward pressure of the water in its projections, or discharge from issues, apertures, or orifices in a direction contrary to the circular motion of the wheel; will any change in the form of the orifices, or of the vanes, tubes, or channels conducting the water to the orifices, take the wheel out of the definition?

The Committee reply as follows:—

1st. A Reaction Wheel is a wheel propelled by the pressure in the direction of the circular motion of the wheel developed by the discharge of the water in a contrary direction.

2d. All wheels propelled, in whole or in part, by the pressure of water in its discharge from them in a direction contrary to their circular motion, are reaction wheels, so far as they owe their propulsive force to this action.

3d. A wheel that discharges the water propelling it, through issues, or apertures, inwardly, and in a direction contrary to the circular motion of the wheel is a reaction wheel.

4th. If the propulsion of the wheel be, in whole or in part from the pressure of the water developed by its discharge in a direction contrary to the circular motion of the wheel, no change in the forms of the orifices, or of the vanes, tubes, or channels conducting the water to the orifices, will take the wheel out of the definition.

By order of the Committee,

WM. HAMILTON, Actuary F. I.

These queries were proposed to the Committee by Zebulon Parker, Esq. of Ohio, who secured the first patent for a Reaction Water Wheel in the United States, and whose claims of originality were established in 1843 in the U. S. District Court of Ohio.

The American Institute is getting a severe castigation all round. We have received not a few communications on the subject of so many medals being awarded to this city.—These things carry well grounded suspicions of partiality.

A New Planet.

Mr. Hurd, the English astronomer, states that he has discovered another new planet near the star Fifteen Orionis. It shines as a star of the ninth magnitude, with a bluish light.

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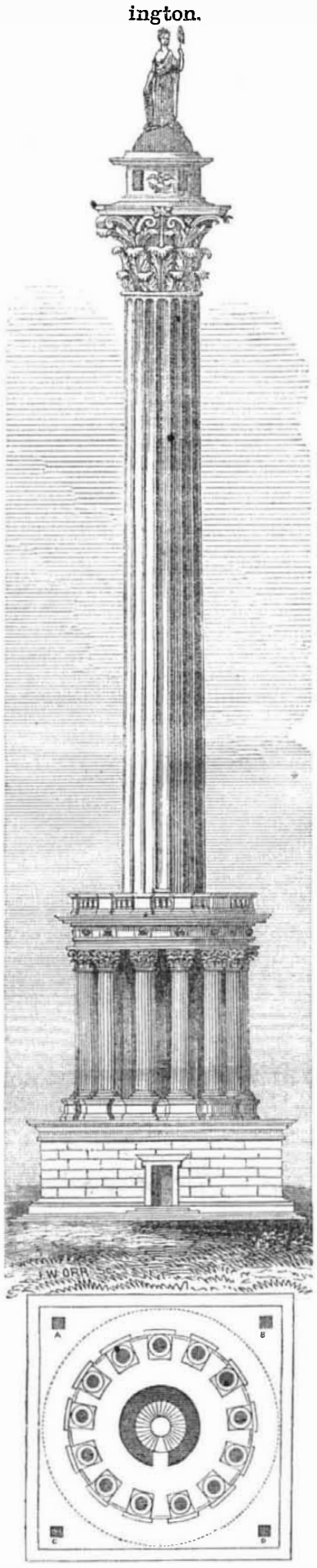
Progress of Mining in the Old World.

Mining enterprise and science having made so much rapid stride, during the past few years, in all parts of the civilized world, a short account of the history and progress of mining and metallurgy, from the earlier ages to the present may not prove uninteresting. Egypt, Assyria, Persia, the Caucases, Asia Minor, the islands of the Mediterranean, Styria, and Spain, (known as Iberia), were the first countries where mines began to be explored and worked with activity, from the earliest and most distant periods. From Spain, particularly, the greatest variety of metals were primitively obtained; and, so abundant was silver, that every description of utensils was made from this now valuable and comparatively scarce metal. In the reign of Augustus, gold was chiefly procured from Upper Egypt, Transylvania, the Indies, Asia Minor, Galicia, and the Austrias; silver from Spain, Greece, and the banks of the Rhine: copper from the environs of Constantinople, the Island of Calypso, Rio Tinto (in Spain,) the Ural Mountains, and the Abruzzi; iron from the Island of Elba, Styria, and Biscaya (in Spain); lead from Spain and England; tin from England: quicksilver from Almada and Ephesias (in Asia Minor). The invasion of the barbarians successively destroyed the greater portion of the works commenced under the donation of the Romans. The new state of civilization which, however, followed, imposed fresh wants, and these works were again opened and worked, although but slowly—yet they progressed; and in the 7th century, we find extensive works in the Moravia, Tyrol, Bohemia, and Hungaria. The mines of the celebrated Hartz Mountains were discovered as early as the year 965, and in the course of the 11th century those of Saxony were commenced; the progress of mining industry began to develope itself, and was greatly increased by the discovery of silver mines in Sweden, the copper mines of Mansfield in 1200, and it was in 1240 that the first coal mines were worked at Newcastle. The mines of Europe were thus progressing when they were suddenly arrested in their progress by the fall in the value of metals, consequent on the discovery of the Americans, in 1492; the crisis, however, was only temporary and the methods of extracting the ores, and working mines, having been greatly improved, and the consumption daily increasing, the European mines were enabled to contend against the American competition. In the 15th century England had already made a rapid advance in the working of her extensive mines; but it was not until the commencement of the 18th century that they reached any real importance, and the discovery of the steam-engine, and the formation of companies of capitalists, raised them to their present greatness. It was, also, about this time, during the reign of Peter the Great, that the mines of Russia attracted the attention of the Czar, and the particular care and attention of the Government, and the nobles, and at the present moment the Emperor of Moscow is the richest miner in the world, all the gold of Russia flows into his treasury. With respect to the mines of France, they were nearly quite neglected previous to the great Revolution, as either the Legislature did not protect them, or the science was completely unknown—during the last half-century, particularly under Napoleon. Since the peace of Europe, in 1815, opulent companies have been formed for working, on an extensive scale, the mines which exist in various departments, and the science has been taken under the protection of Government, who has establish a Royal School of Miners, and Engineering Department, in Paris, attended by the most renowned of their scientific men, with proper instructors, who give gratuitous lectures, exhibit experiments in mining and metallurgical operations. The mineral productions of the world are calculated, to be annually worth, 300,000,000 dollars, one-half of which is supplied by the works established in Europe alone. In Spain, mining industry, is arousing from the dormant state in which it has so long lain, and several eminent companies, English and natives associated, have been formed for reworking those mines, which, centuries since, produced so much wealth.

Monument of George Washington.



The above is an engraving of a monument to Washington. It is the design of Cyrus L, Warner, Architect, No. 122 Broadway, in this city, and it is very appropriate. The style is the monumental Corinthian, simple and chaste like the character of the man it is intended to commemorate. No Gothic gloom is here—it speaks for itself harmonising with the law of association. It is intended to stand on a stylobate, 65 by 65 feet and 25 feet high. The 13 columns are representatives of the 13 colonies that achieved our independence. The distinguishing features of the colonade, will be in the capitals and the flutes on the shafts on which will be 13 only on each.—There will be a capital composed for each column, which will be distinct in character from all the others. On the frieze of the eutablature over the columns will be the coat of arms of the thirteen original states. The shafts of the columns will be 40 feet long and the superior diameter will be 4 feet, and to stand on a pedestal 5 feet high.

The large column indicates the Union of the 13 small columns and is supported by them. The capital to be composed of the 13 small capitals and to be 13 flutes on the shaft, and to be a spiral staircase through the shaft to the top of the capital which is to be lighted hrough the sides of the shaft. Over the capital to be the United States coat of arms and the Genius of Liberty. The whole height to be 295 feet to the Genius of Liberty and the superior diameter will be 21 feet.

Washington to be represented in four characters sculptured in marble, one of which is to stand in each spandrel of the stylobate. At A, when Aid to Gen. Braddock; at B, when Commander in Chief of the United States Forces; at C, when President of the United States; at D, when retired to private life.

New Article of Food.

At a late meeting of the French Academy of Science, M. Lamarre Picquot described with enthusiasm the properties of a plant of the leguminous family, which he has had occasion to observe in the course of his travels across the northern regions of North America. This plant, of which he does not give the name, produces a tubercle, very abundant in fecula, and constituting the principal aliment of certain savage tribes. This tubercle which contains no acrid, poisonous, volatile, or milky property, is agreeable to the taste. Before arriving at complete maturity, the inside of it is tinged with green and slightly sugary, then it becomes of a remarkable whiteness, without contracting a fibrous character. In the countries where it is met with this plant grows naturally and without cultivation it appears to succeed in dry pebbly soil, and resists prolonged and severe heats. M. Picquot thinks it would be prudent to provide against the casualty of a new invasion of the potato disease, by introducing into France and the North of Europe a plant which prospers in the worst climates. Undoubtedly it cannot be too strongly recommended to a civilized country to cultivate the greatest possible variety of alimentary plants, it is the only means of being provided against the chances of bad years, but before affirming that the American plant is really susceptible of taking the place of the potato, it will be well to be sure if it is not in fact biennial and if it is capable of furnishing by cultivation larger tubercles than we have seen.

Natural History.

A paper was lately read before the British Association of Geologists by E. Vevian, which gave an account of some recent researches on Kent's Cavern by the Torquay Natural History Society in which it would appear that our forefathers were at one period unacquainted with the use of iron.

In one place was found a layer of dark mould, containing burnt wood or charcoal, with recent shells and bones, resting on the floor of staglamite, and below this, a solid bed of red marl, full of broken bones, and teeth of extinct animals. In another place, below a floor of staglamite, which was carefully swept and seemed never to have been disturbed, they found the same red loam, with many bones much decayed, and a flint knife. In another place, where the staglamite was about 1 foot thick. the same loam contained a bed of fossil teeth, principally of the hyena, many fossil bodies, and among them another very perfect flint knife. The author thought that the cave was first inhabited by bears, hyenas, and other carniverous animals, by whom many of the bones were carried into the cave; that those, by means of a flood, were mixed with the red loam, and that men subsequently inhabited the cave, leaving the flint knives now found. Then came a third period, in which the staglamite was deposited; and, last of all, that period in which the British remains found above the staglamite were deposited in the cave.

Feline Electricity.

A Correspondent of the Gardner's Chronicle states that when the cat is cold in winter, and you are cold too, if you put your hand on the cats chest, and then rub the back with the other hand you will (a Frenchman has just found out) receive a sharp shock, and two or three weeks after the cat will probably die.

TO CORRESPONDENTS.

"D. E. T. of N. Y."—We cannot with propriety pay the postage on your letter and answer your questions too. That is asking too much.

"W. H of N. C."—Your plan of mechanical ball propulsion, is not new. A machine constructed upon the same principle was exhibited here a number of years ago.

"W C. G. of Philadelphia."—Mr. Biddle, the inventor of the Æolian Windmill, has not taken out a patent for the United States that we are aware of. His patent was granted in the month of May for England, his native country.

"A. K. of N. H."—An engine of two horse power can accomplish more work than two horses, if that power is applied right. An engine of two horse power can carry machinery as strong as that in a horse power, but what is the use of shafts and wheels as large a steamboat's when smaller will answer the purpose much better. An engine of two horse power will be more liable to get out of order than one of five horse power. The one you refer to is as good, if not better, than any we know of.

"C. W. of W. N. Y"—The subscribers to the Journal have not yet paid up.

"R. J. Y. of Mass."—Whatever may be the diversity of opinion regarding the operations of nature, there can be doubt of certain fixed laws, and we still hold to our former opinions that electricity will yet be found to exercise an influence upon some of those phenomena attributed to the other causes.

"J. V. R of N. Y."—We were not aware of heat "having been now universally recognised to be matter—a substance in itself." A plain effect is not an indication, of that effect itself being a substance. Is sound matter, or the effect of certain action upon matter. This will test your reasoning.

Messrs Ibbotson who received a prize from the Institute for cutlery is an English firm, a famous Sheffield house. We believe that considerable of their cutlery, however, is made at Auburn State Prison.

Powder Magazine.

Powder Magazines should be constructed with walls of very heavy stones, well cemented and strongly fixed together, and with a slight wooden roof, slightly fastened to the walls and separating itself into pieces of six feet square as soon as lifted by an explosion. Had the powder magazine in Nashville been thus made, its terrible and destructive explosion would not have had but the effect of throwing off the roof.

It would have done no more damage to its neigborhood than would a heavy cannon fired with its muzzle pointed upwards, and loaded only with powder and wad. Does not humanity directed by an enlightened forecast, dictate the mode of constructing powder magazines, whether public or private should be prescribed by a general law, conforming to this suggestion, and thus rendering their explosion harmless to all outside the building.

Of course these magazines are only those used for general deposits.

Cure for Cancer.

A jeweler who had a bad cancerous pimple on his cheek, having occasion to dissolve some gold in nitromuriatic acid, rubbed it several times, unconciously, with his impregnated fingers, and was surprised to find it speedily change its appearance, and shortly disappear. M. Recamier, suspecting the cause made several uniformly successful experiments with the same mixture, and thus has accidentally discovered a new caustic for cancerous affections. The proportions he adopts are one ounce of the acid to six grains of chloruret of gold.—*Ex.*

Our readers will perceive that the above discovery which we notice in a great many papers is nothing more than what can be accomplished by common lunar caustic.

Census of Cleveland.

A census of the city of Cleveland, Ohio, has just been taken. The following is an abstract of the returns:—Whites, 12,575; colored, 194—Total 12,769. Increase since 1840, 6698; increase in the last eighteen months, 2634.

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NOTICES OF THE PRESS.

The Scientific American is a journal of as much real utility as any one with which we are acquainted. It is the advocate of industry—the journal of mechanical and other improvements—containing a catalogue of American Patents, with engravings illustrative of new inventions. No mechanic should be without it.—*Republican Warsaw, Ind.*

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The "New York Scientific American" should be in the hands of every artist and mechanic. It is the most valuable paper of the kind now published. Young men could not spend their money to more advantage than in taking this journal.—*Phoenix, Bristol, R. I.*

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The Scientific American.—This is a paper that every mechanic should become an immediate subscriber for, and should read with care. It is devoted exclusively to the mechanic arts, and every number contains information on those subjects that, we should think would be of inestimable importance to every artizan. Published by Munn & Co., New York. Terms $2 per annum, one half in advance, the remainder is six months.— *St. Lawrence Mercury, Pottsdam, N. Y.*

We have in our possession hundreds of other notices from the different journals published in this country and Europe, that speaks equally favorable of the "Scientific American" but believing it to be conceded by all (that have perused the journal) that it is the best scientific and mechanical paper published, we think it useless to subjoin anything further showing its merits.

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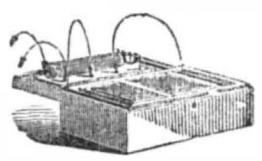

Dr. Smith's Torpedo Magnetic Machine.

☞The following is an extract of a letter from H. U. Reynolds, M. D., of Jefferson N. Y., dated Feb. 15, 1847.

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Augusta, Maine, Oct. 1, 1847. J. G. JOHNSON.

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Office on F street opposite Patent Office.

He has the honor of referring, by permission, to Hon. Edmund Burke, Com. of Patents; Hon. H. L Ellsworth, late do; H. Knowles, Machinist, Patent Office; Judge Cranch, Washington, D. C.; Hon. R. Choate, Mass., U. S. Senate; Hon. W. Allen, Ohio, do; Hon. J. B. Bowlin, M. C. Missouri, Hon. Willis Hall, New York; Hon. Robert Smith, M. C. Illinois; Hon. S. Breese, U. S. Senate; Hon. J. H. Relfe, M. C. Missouri; Capt. H. M. Shreve, Missouri. j23

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☞Pictures taken at this establishment warranted to give satisfaction. j24

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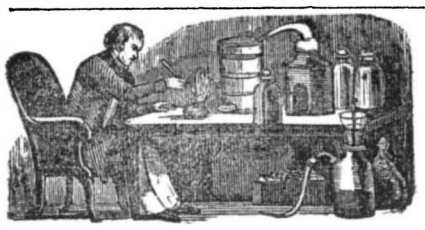


Patent Inks and Salts of Gold.

We are indebted to our valuable exchange, Robertson's London Mechanics' Magazine, for the following specification of a patent granted to the Rev. J. B. Reade, of Aylesbury, England. His process of making inks will be found to be entirely original and his writing inks are undoubtedly superior to any kind now in use, as there is not that acidulous component in them which some ink makes seem to consider indispensible for the quick corrosion of steel pens. His printing inks too, are peculiar, but that they are superior to those in common use, we have our doubts, although we hope they are groundless. It is well known that Davy doubted the elementary character of iodine and Mr. Reade's soluble Prussian blue gives us some reason to believe that the great chemist may be correct. Two new salts of gold are described which are of a very interesting character, named ammonia-iodide and ammonia periodide of gold. The material parts of the specifications are as follows, nearly in the patentee's own language.

Firstly, he manufactures in manner following a blue writing ink, which is wholly free from acid, and therefore well adapted for use with steel pens. He first obtains a solution of iodide of iron by the process ordinarily followed for that purpose, and then dissolves therein half the weight of iodine already employed. He next pours this mixture into a semi-saturated solution of yellow prussiate of potash, employing a weight of this salt nearly equal to the whole weight of iodine used in the above iodine solution. A decomposition of the materials, thus brought together, immediately takes place, when the cyanogen (of the prussiate of potash) and iron combine, and are precipitated in a solid form, and the potassium (of the prussiate) and iodine combine to form a neutral iodine of potassium, which remains in solution with a little excess of iodide of iron. He next filters and washes the solid precipitate of cyanogen and iron (which is soluble Prussian blue,) and finally dissolves it in water, which forms the blue ink required. In this process, it will be observed that neither any acid nor persalt of iron is employed, as is usual in the formation of Prussian blue.

Mr. Reade was led to these results by a microscopic examination of the metallic colors in salts of the ashes of plants. He employed iron and iodine to produce the same effects on pure salts; and in the course of his experiments he ascertained that these two substances (iron and iodine) have so great an affinity for each other, that when placed together without any water, or when rubbed together, they very speedily form a liquid, containing an excess of iodine in solution, which, being added to a solution of prussiate of potash, gives the compound of cyanogen and iron or soluble Prussian blue, which has just been described. The addition of water alters the character of this iodine solution; without water, it turns litmus paper green, and with water, it has the usual acid reaction, thus apparently confirming Davy's original doubt as to the elementary character of iodine.

Secondly, he forms a neutral iodide of potassium, of great purity, and wholly free from alkaline reaction, in manner following: he takes the solution which remained over from the process first described, after the Prussian blue had been precipitated, which solution consisted, as before stated, of a neutral iodide of potassium, with iodide of iron in excess; and he gets rid of that excess by the well known process of fusion and crystalization.—The result is an iodide of potassium, which is as pure as when iodine and potassium are made to act directly on one another, and is perfectly free from the alkaline reaction on turmeric paper, which invariably characterises the most careful preparations of this salt when carbonate of potassa is employed, as usual, in its manufacture. It is also much less deliquiscent than the ordinary iodide of potassium of commerce, and, on account of its great purity, much to be preferred in medicinal preparations.

Thirdly, he manufactures a blue ink of peculiar intensity, and, therefore, particularly suitable for printing purposes, by using the same materials and manipulating them in the same way as first described, with the exception that for the iodine wherever it is used, he substitutes bromine, and rubs up the precipitate in oil.

Fourthly, he forms a bromide of potassium of great beauty, and wholly free from alkaline reaction, by treating the bromide of potassium which remains over in a state of solution from the process last before described, in the same way as the iodide of potassium solution is directed to be used under the second head of this specification.

He manufactures a very superior black writing ink, by adding to gall ink of a good quality soluble Prussian blue described under the first head of this specification. The addition of this Prussian blue makes the ink, which was already proof against the alkalies, equally proof against acids, and forms a writing fluid which cannot be erased from paper by any common method of fraudulent obliteration without the destruction of the paper.

Sixthly, he manufactures in manner following a red writing ink, which is greatly superior to the common solutions from peach wood and Brazil wood, not only in permanent brilliancy of color, but also in its freedom from acid, and consequent fitness for use with steel pens. He first boils cochineal repeatedly in successive quantities of pure water, till it ceases, or nearly so to give out any coloring matter. He then boils it in water containing liquid ammonia, which combines after the manner of an alkali with an acid, with the residue of coloring matter, and leaves the insect matter nearly white. The liquid products of these successive boilings are then thrown together into an earthenware vessel, and in order to get rid of a peculiar element or principle still combined with the coloring matter, and which has a great affinity for iron, he precipitates the coloring matter with ammonio bichloride of tin. The precipitate is afterwards dissolved in ammonia, and protiodide of tin added, till a sufficient degree of brilliancy of color is obtained, which completes the process, water being added ad libitum, according to the degree of body desired to be given to the ink.

(*To be concluded.*)

Simple Method of making Oxygen Gas.

I take a mercury bottle and then an old gun barrel, draw the breech end to a convenient size to cut a thread on it so as to make a tight joint; then take a lead tube and connect one end to the muzzle of the gun barrel and the other end to the gasometer. All things being prepared, take about 6 ounces of chlorate of potass and put it in the iron bottle, make the joints all tight, then place the bottle in a convenient fire to make the bottom of the bottle red hot, and you will have about 10 or 12 gallons of pure oxygen gas in a few minutes.

J. P. J.

Waterbury. Oct. 29, 1847.

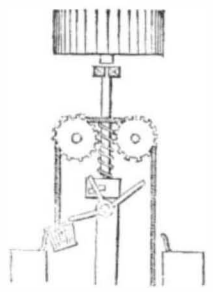
Preserving Animal Substances.

Putrefaction reqires the presence of water; hence, by drying animal substances, they are preserved. Hence one reason for the preserving power of salt, from its strong affinity for the water contained in these substances. Alcohol operates partly in the same way. Various substances act by entering into combination, and the divellent tendencies of the affinities of the constituents of those substances are overcome, among those are corrosive sublimate, copperas, tannin, wood, vinegar and creosotte. A high temperature stops putrefaction by coagulating the azotized materials. Putrefaction is impossible above 182° or below 32 degrees. Freezing acts precisely as drying. Hence bodies preserved by frost, and those which remain fresh for years after death on the Arabian deserts, are preserved from the same essential cause.

A drop or two of honey well rubbed on the hands while wet, after washing with soap, prevents chapping and removes the roughness of the skin—it is particularly pleasant for children's hands and faces in cold weather.

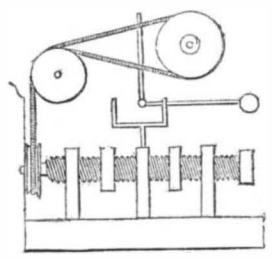
MECHANICAL MOVEMENTS.

Hydraulic Machine.



Suppose the upper part of this figure to represent the sails of a horizontal wind mill, or any sufficient moving power to revolve the shaft which carries the spiral worm below, and the shaft coupled immediately below the sails so as to allow of a small vibration, thereby allowing the spiral, or worm, on only one wheel at a time. At the back of these wheels, and on the same shafts are placed pullies, over which a rope is passed carrying a bucket at each extremity, one of which is elevated at the same time that the other is lowered by the alternate action of the worm on the opposite wheels. In the centre, and immediately below the worm is placed a vibratory piece, against which the bucket strikes in its ascent, and which by means of an arm connected with the step in which the worm shaft is supported, traverses the worm from one wheel to the other, by which means the bucket which has delivered its water is again lowered at the same time that the opposite one is elevated.

Circular and Vibratory Motion.



Supposing the upper circle to represent a section of two drums close to each other and running in opposite directions, the endless band which passes over the carrier pulley below will impart motion to the horizontal warve at the lower end of the perpendicular screw, which is supported by the upper and lower arms, but carries the central piece as a moveable nut. To this nut is connected a fork which at each extreme of its traverse vibrates the weighted lever, and thereby passes the endless band from one drum to the other, and reverses the revolution of the screw.

Causing Cabbages to Head During the Winter.

The Maine Farmer says, that in the fall of the year when it is time to gather cabbages we always find more or less of them that have not formed any heads. They may have grown well, and have a large stock of leaves, but not have closed up in the form necessary to make a good, solid, compact cabbage.

In the fall of the year just before the ground closes up, gather all the cabbages which have not headed, together. Then dig a trench, eighteen inches or more deep, and of sufficient width to admit the cabbages. Then close the leaves together by hand, winding a wisp of straw or something else around them to keep them together, and then put them in this trench with heads down and roots up Then pack straw or leaves and earth about them snug, and round up the earth over them —The trench should be dug in a place where the waters of the rains and snows runs off and will not stand about them. A board or couple of boards, nailed together in the form of a roof and put over the mould may be useful.

In the spring of the year open your trench and you will find that the cabbages are all headed firmly together, and if the water has not got in will be solid and hard.

Chemical Analysis of Tea.

In the memoirs of the London Chemical Society there is an interesting paper by Mr. Warrington, on the analysis of tea, in which he states that he has not only removed the whole of the coloring matter, or glazing, from green tea, but he has been able to analyze the matter removed, and to prove it, by chemical evidence, to consist of Prussian blue, and gypsum principally. So that in fact, the drinkers of green tea, as it comes to the Engltsh market, indulge in a beverage of Chinese paint, and might imitate the paint by dissolving prussian blue and plaster of Paris in hot water. The Chinese do not themselves drink this painted tea; they only sell it.

Experiment With a Plant.

"Cut a small branch of oleander from a thrifty plant, place it in a vial partly filled with rain water, so that the lower end of the branch may be immersed about half an inch in the water. Place this in the sun in an open room, and in about fifteen or twenty minutes small roots will shoot out from the end of the branch, presenting a beautiful appearance, After these roots have extended two or three inches, the branch may be set out in moist earth, and if frequently watered, it will grow rapidly and soon form a large thrifty stalk. Ladies who are fond of flowers may easily propagate oleanders in this manner, and in a few months multiply these beautiful plants to an indefinite extent."

Billious Cholic.

The following receipe we are assured is a certain remedy for that distressing disease, as it has never been known to fail in a single instance:

"Take, say a fourth of a pound of chewing tobacco, tear it well to pieces, and put it into a vesssel and pour to it a sufficiency of boiling water to moisten and swell the leaves then lay it on a cloth and apply it to the seat of pain." Relief will be obtained in less than fifteen minutes.

We cut this from an exchange paper, and would pronounce it to be a dangerous expedient.

An author's genius is always greater than his works, and he could always have done better than he did.

THE NEW YORK

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